

The role of e-learning in Algerian universities in the development of a knowledge society

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Summary of the study:

Many factors and actors have to be taken into account in building the Arab knowledge societies: Government, private sector, information, professional and education institutions. In this paper, focus will be put on *the role of E-learning in arab universities in the development of a knowledge society*. A case study of the Algerian universities will illustrate our study. One of the basic requirements for education in the 21st century is to prepare populations for participation in a knowledge-based economy, including the social and cultural perspectives. The times in which we live now is a new era - the era of civilization , information development or the era of knowledge as it is called, which paved the way for the emergence of a new global community called the "Knowledge society". This represents a challenge to the education systems in various international communities, causing a significant change in the role of educational institutions, especially after the advent of the internet in teaching and learning in developed countries and the emergence of the so-called " web Based Learning Environments". E-learning is a cornerstone for building inclusive knowledge societies. Society and helped to grasp the opportunities offered by ICT by placing the individual at its center. The Arab world needs to focus in the coming years on higher education quality and entrepreneurship education to bridge the gap between education supply and labor market demand, as well as tackling graduate unemployment, which was a factor driving the 2011 uprisings, according to a draft Arab research strategy.

Scope and Methodology of the study:

Our study is based on a methodology composed of two parts: the first contains the descriptive method for the analysis of reality in its various dimensions. The second part focuses on the method of analysis for future Prospective Analysis, an approach for forward-looking Predictive judgment.

Issues:

Based on the above, issues can be identified in the study the following main questions:

- What is the reality of knowledge and education in the Arab world?
- What are obstacles to the production of knowledge in the Arab educational environment?
- What are the main contributions and pioneering experiences in the field of e-learning globally and regionally?
- What are the main challenges of e-learning and its application requirements and mechanisms of activation in the learning environment?
- What are the main actors and the ways in perceptions about rooting and activate the role of e-learning in the learning environment to effectively contribute in strengthening the foundations of the knowledge society and the Arab desired information?
- What is the reality the role played by Arab universities in the generation of knowledge in the community?
- Are there differences in the evaluation of the role of Arab universities in the development of knowledge from the viewpoint of the members?
- What are the main features of long term Arab economic growth and what are its main drivers? Has the region undergone any positive structural transformation? What are the main features of the Arab labor market?
- What is the order of magnitude of the employment challenge? Is there fiscal space to address Arab structural economic deficits? If so, through which channels?
- How do Arab governance systems and institutional structures impede Arab human and economic development? How can governance systems be made more development friendly?
- What are the main features of a new Arab social contract and a new development model? What are the most pressing issues to respond to now?.

Hypothesis:

Study was based on Muslim orientations and starting points and the following:

- That the new economic equation does not depend primarily on the abundance of natural and financial resources, but on the knowledge, skills and competencies, ie on science and innovation
- The global trend towards e-learning has become a thing does not need to find evidence to prove, and circulated in the Arab countries cannot be a substitute for traditional education but a complement
- Introduction of e-learning in the Arab education and stimulating the key issue should mobilize all human and material resources and moral appropriate .

I. Current situation of Education in the Arab world

Low spending on science

Problems in higher education systems in the Arab world include reluctance to change and innovate, poor organizational frameworks, traditional management systems, financial dependence on governments, and lack of autonomy and academic freedom for universities. There are 470 universities and educational institutions catering to 400 million people in the Arab world, roughly translating into 1.2 institutions for every million people. There are about nine million students, 10% of whom are in postgraduate studies. Four out of five undergraduate students are enrolled in humanities, with just one in five enrolled in scientific programs.

Although there are 550 scientific centers across the Arab world including those in universities, scientific publications are scarce and Arab states spend a meager 0.04% on scientific research compared to 3% to 5% of gross domestic product spent by industrialized nations.

Arab countries now spend as much or more on education, as a share of GDP, than the world average. They have made great strides in eradicating illiteracy, boosting university enrolment and reducing gaps in education between the sexes.

But the gap in the quality of education between Arabs and other people at a similar level of development is still frightening. It is one reason why Arab countries suffer unusually high rates of youth unemployment. According to a recent study by a team of Egyptian economists, the lack of skills in the workforce largely explains why a decade of fast economic growth has failed to

II. Solutions : Roadmap for reform

In an effort to revamp Arab higher education and research systems, the strategy calls for the promotion of international collaboration and partnerships with global universities, building human capacity and skills, improving management skills and abilities, identifying successful Arab experiences in higher education and sharing expertise lift more people out of poverty. In addition, more systematic attention should be paid to the outcomes of higher education and greater emphasis should be placed on accountability and incentive systems to improve service delivery, the strategy says. There should also be greater stress on entrepreneurship education in universities in order to produce employable graduates.

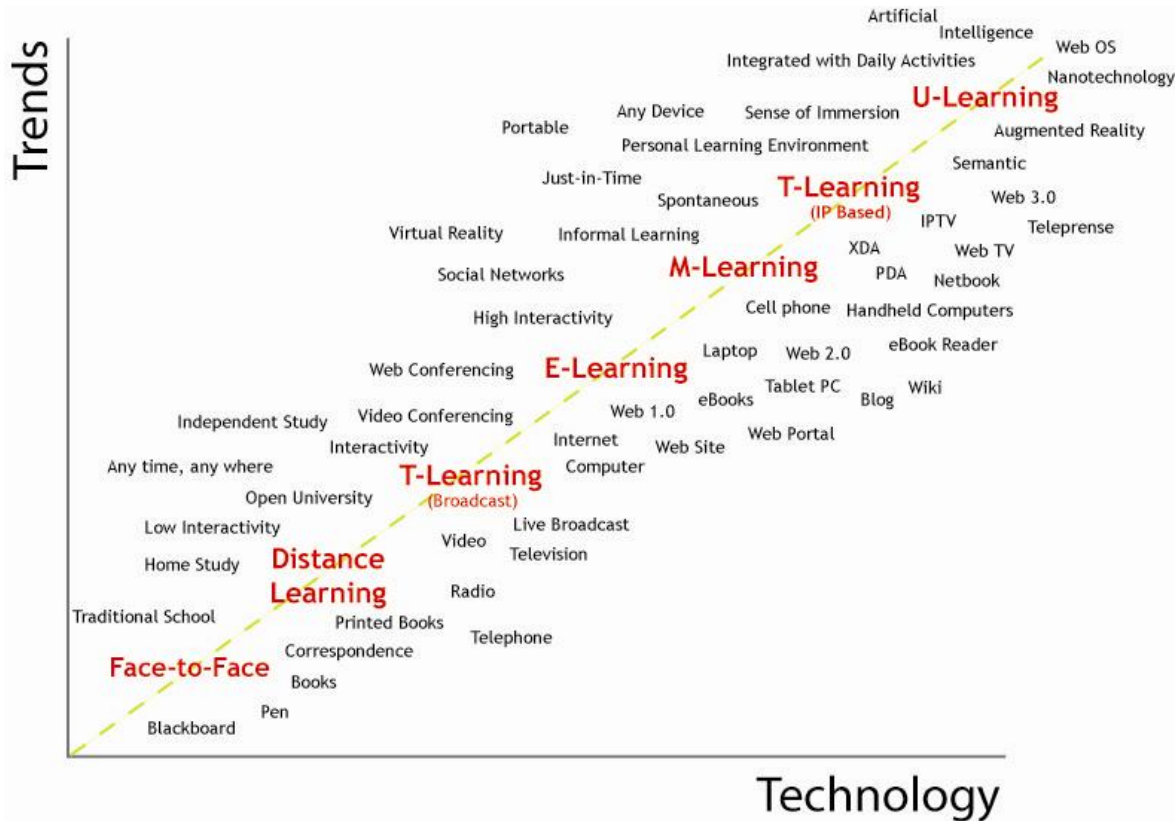
According to Said Oukil, an Algerian professor of innovation and entrepreneurship at King Fahd University of Petroleum and Minerals in Saudi Arabia and author of the June 2011 report Arab Countries Can Perform Better with Clear Emphasis on Innovation, Entrepreneurship and an Evolving Culture, Arab universities need to become more entrepreneurial. This would have a positive impact on job creation, exploitation of ideas and innovation and would therefore promote social stability and economic progress. Promoting citizenship education and academic freedom But Hilmi Salem, director-general of applied sciences and engineering research centers at the Palestine Technical University, said the strategy lacked an implementation plan and monitoring system. He recommended that Arab universities should make use of online education resources such as Teaching Citizenship in Higher Education. He said a directory for experts and researchers, a guide to specialized international institutions and a database for best practices should be established. This view was supported by Egyptian higher education expert Manar Sabry, of the State University of New York in Buffalo, United States. "The revolutions throughout the region imply a need to improve the relevance of university education to the job market," she said. This would require strong governance, greater accountability, quality assurance and the ability to respond to changes in job markets nationally and internationally.

III. The role of e-learning in the development of a knowledge society

E-Learning has developed greatly as the method of first choice for distance education and we are seeing a convergence between distance and conventional face-to-face education - due to moves by conventional education providers. Conventional universities and schools throughout the world are pro-actively adopting distance learning technologies not only to reach the unreached providing wider openness and access but notably as augmentation for their current on-campus students .

Today's learning and education technology is developing with overwhelmingly what we guess for tomorrow. In those days eLearning technology application changed its structure by combining via new discussion technologies such as M-Learning, T-Learning and U-Learning. Developed chart below, show us the latest trends of technology which education institutions should have to adopt their education or material producing strategies according to newest technologies indicated in chart.

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Learning Trends vs Technology © Özlem Ozan & Yasin Özarslan, 2009

III.1-UNESCO E-learning courses for Knowledge society

III.1.1-Sustainability Science Course

This course is expected to provide a model for sustainability education among higher educational and governmental institutions. The course covers comprehensive framework of sustainability, such as concepts, sustainable resource use (energy, water, food, materials, etc), institution, economy, social capital and human capital.

III.1.2-Renewable Energy Policy & Planning for Sustainable Development (2nd)

III.1.3-E3i (Energy, Economy and Environment)



Monitoring and Evaluation of Renewable Energy Applications in Candidate E3i Villages

III.1.4-Solar Solutions for Energy Wise Communities in Asia

III.1.5-E3i (Energy, Economy and Environment) Self-Sustainable Eco-village concept

III.1.6- Capacity Building for University – Industry Collaboration and Technology Transfer



Topics covered:

How to develop university-industry partnership?

Successful negotiation skills

Technology evaluation and valuation

Setting up Technology Transfer Office and Business Incubation Center

III.2-Popular e-learning CD on ICT in education now available online



When UNESCO's Bangkok Office announced the release of its E-Learning Series on Information and Communication Technology in Education in June 2009, it was beyond expectation that 3,000 CD-ROMs would run out in just a few months. Requests for copies came literally from everywhere. To satisfy users' demand, the Bangkok Office makes now its CD available online.

The series is intended for all those who are interested to learn more about ICT in education. The CD contains two modules that were especially designed for policymakers, educational planners, school administrators and educators, in general:

Module 1: ICT in Education Essentials provides learners with all the essential information promoting a common understanding of the topic in the education sector;

Module 2: ICT in Education Decision Making helps to consider the different factors involved in choosing the appropriate technology to use in a particular education setting.

IV-Arab world education projects and networks

A number of different initiatives and projects can serve as examples of multistake holder activities that have been submitted by international organizations, private businesses, civil society entities and others:

The Arab Urban Development Institute/Arab Towns Organization developed the Arab City ICT Strategy (CICTS);

-UNESCO Associated Schools Projects Network (ASPnet) National Co-ordinators in Arab States

-Islamic Educational, Scientific and Cultural Organization (ISESCO)

-Palestinian European Academic Cooperation in Education (PEACE)

-UNITWIN Network in Arab States

IV.1-University Twinning and Networking

UNITWIN is the abbreviation for the University Twinning and Networking Program.

The UNITWIN/UNESCO Chairs Program was conceived as a way to advance research, training and program development in all of UNESCO's fields of competence by building university networks and encouraging inter-university cooperation through the transfer of knowledge across borders.

The UNITWIN program aims to be pertinent, forward-thinking and to impact socio-economic development effectively. So far UNESCO Chair and UNITWIN Network projects have proven useful in establishing new teaching program, generating new ideas through research and reflection, and facilitating the enrichment of existing university programs while respecting cultural diversity.

Today, 715 UNESCO Chairs and 69 UNITWIN Networks are established within the Program, involving over 830 institutions in 131 countries.

Since the adoption of new strategic orientations for the UNITWIN Program by the Executive Board at its 176th session in April 2007, emphasis has been placed on:

- The dual function of UNESCO Chairs and UNITWIN Networks as "think tanks" and "bridge builders" between the academic world, civil society, local communities, research and policy-making;
- Realignment with UNESCO's priorities (Medium Term Strategy for 2008-2013 (in pdf));
- Readjust geographic imbalance which is now in favor of the North;
- Stimulate triangular North-South-South cooperation;
- Creation of regional or sub-regional poles of innovation and excellence;
- Closer cooperation with the United Nations University (UNU)

International University Cooperation promotes intellectual cooperation through twinning and other linking arrangements among institutions of higher learning and academics throughout the world to permit access, knowledge sharing within and across borders.

Rooted in its function is to bridge the knowledge gap and substantially reduce the brain drain by assisting the establishment of poles of excellence in Member States.

Thus IUC endeavors to meet emerging challenges in an era of globalization by advancing the use of new information technologies to build capacity and increase knowledge to advance the cause of education, science and technology, social and human sciences, culture and communication.

IV.2-Arab Network on Staff Development in Higher Education (ANSD)

IV.3-UNESCO/Arab Region Ecotechnie Network (AREN)(587), established in 2002 at South Valley University, Aswan (Egypt).

Fields/Disciplines

Multidisciplinary Environmental Education: Ecology, Biology, Environmental Sciences, Economics, Social Sciences and Technology.

Objectives

The principal objectives of the Cooperation Program are to promote:

Multidisciplinary environmental education, research and training in teaching institutions, at the undergraduate and postgraduate levels.

The development of ecotechnie concepts, curricula, training course and research projects, including the development of joint undergraduate and postgraduate program and advanced research among the participating institutions.

Increased environmental awareness among the general public, technical personnel and decision-makers.

Exchange of ecotechnie-related information at the regional level between educators, researchers, policy makers and students.

Sharing of experiences, information and data between members of the Network related to ecotechnie-oriented education, training and research.

IV.4-Peace Program

The initiative to launch a program of academic cooperation with the Palestinian universities was taken at an international solidarity conference convened by several European universities - members of the Coimbra Group - at the University of Sienna in August 1991 when most Palestinian universities were closed.

The Network counts at present (March 2011) 66 members: 53 European and 13 Palestinian universities. It cooperates closely with the major NGOs of higher education: the International Association of Universities (IAU) the International Association of University Presidents (IAUP), the European Association of Universities (EAU), the Association of Arab Universities (AARU), the Community of Mediterranean Universities (CUM), etc.

Objectives of the peace program

As an interuniversity network which seeks to promote international academic cooperation with the Palestinian universities, PEACE focuses its action on those areas in which international cooperation has made full proof of its efficiency, notably by contributing to raising the quality, efficiency and relevance of teaching and research at Palestinian universities and enhancing their institutional and staff development. This it does mainly through facilitating study abroad for Palestinian graduate students and for young academics, to upgrade their training and return to teach at their universities of origin. It also facilitates staff exchanges and helps set up academic programs at Palestinian universities. In keeping with the spirit which led to its foundation, PEACE seeks to play also a much wider role as a means of international opening for the Palestinian universities, of overcoming difficulties and isolation, and of removing entrenched tensions and animosities that have accumulated during long years of turmoil.

Activities of the peace program

Its action is focused on the following main areas:

1. Faculty Development and Academic Mobility

2. Academic Programs and Research

Several initiatives have been developed with a view to enhance the quality of teaching and research at Palestinian universities, as presented in the select list below:

-Center of Excellence in Mathematics and Theoretical Physics at Birzeit University (ECCE-Birzeit).

-Center of Advanced Studies and Research in International Cooperation and Development in Palestine (CASR-ICD).

-E-Learning and Open and Distance Education at Palestinian Universities.

This new project is meant to help respond to urgent needs facing higher education institutions at present, namely (i) the pressure for increased access by growing numbers of secondary school graduates, (ii) enhancing the quality of programs and develop new ones in priority areas for national development and (iii) helping surmount the difficulties caused by the frequent closures of institutions and the daily ordeal for both students and academic staff to reach their campuses. The Project builds on work done within the framework of the Avicenna Project (<http://pleiad.unesco.org/portal/>), executed by UNESCO with financial support from the European Commission by further developing the capacity of the Avicenna Knowledge Centre at Al Quds Open University, while enhancing infrastructure facilities and service capacities for ODL at the other Palestinian universities. The ultimate goal is to establish a **Virtual Palestinian University**, working in close partnership with the traditional universities and based on strong ties with similar institutions abroad.

-Palestinian Teacher Education Strategy.

3. Bilateral Cooperation Programs in Support of Palestinian Universities

V- The role of e-learning in Algerian universities in the development of a knowledge society

V.1-ICT IN ALGERIA

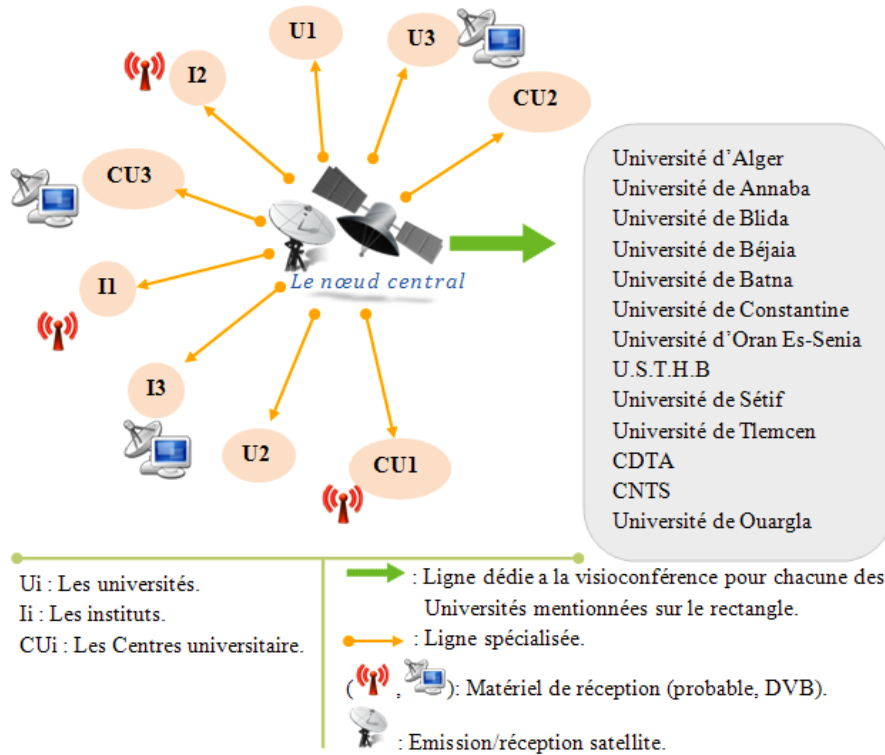
In Algeria, the integration of ICT at the level of the university is relatively recent. Therefore, there's certain awkwardness in handling this new issue. The double problem which emerges is: First, the training of trainers as to their aptitude to handle the new technologies and adopt the adequate pedagogies. Second, the question of the readiness of the Algerian learners: to what extent are they ready and able to adopt new learning strategies involving the use of computer and internet?

The exponential development of increasingly sophisticated communication technologies has prompted universities, companies and educational institutions to experiment with alternatives to the traditional teaching methods, thereby leading to the development of online courses. However, there are also new opportunities to be seized for learner participation in the creative process. At present, Information and Communication Technologies mediating learning represent an important component of education and training systems. Over the last two decades, concerted efforts have been made in the area of distance higher education in Algeria. These endeavors can be classified into three modes: Distance or open education programs provided by traditional higher education institutions, distance or open education institutions, and a virtual university.

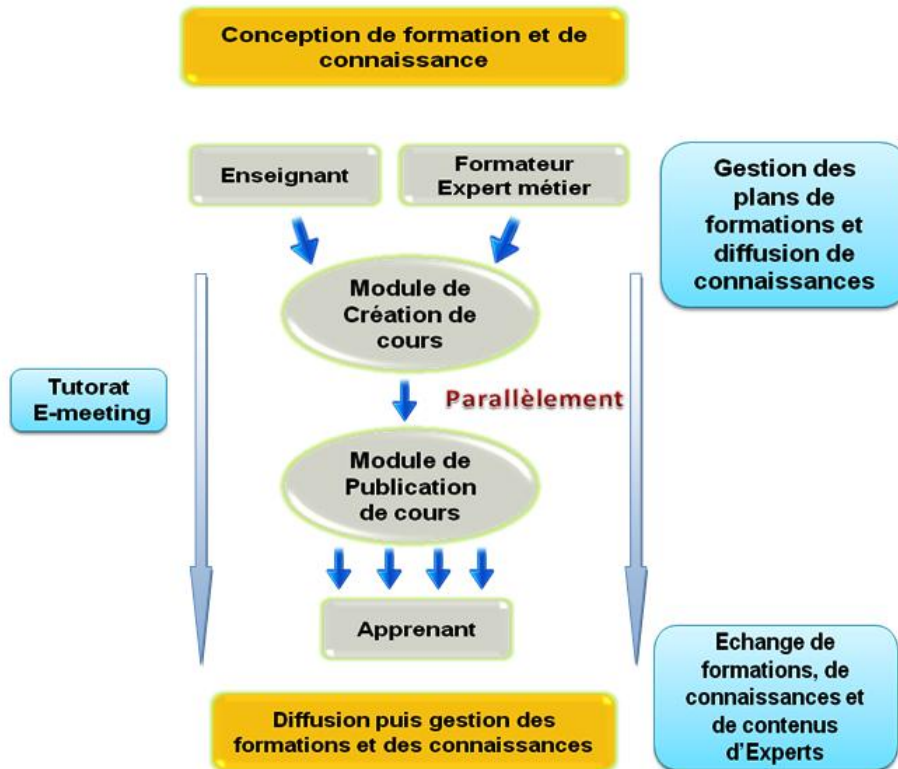
V.1.1-National System of Distance Learning Network

To compensate for the lack of supervision on the one hand, but also in order to improve the quality of training, in accordance with the requirements of quality assurance, other forms of learning and teaching, incorporating new educational approaches in the training process are being implemented. This is how we have launched the national system of distance education, whose objectives are divided into three steps: The first phase of use of technology, videoconferencing in particular, to absorb the flow of learners, while significantly improving the quality of teaching and training (short-term processes). A second step, which will use new educational technologies, based especially on the Web (online learning or e-learning), to achieve quality assurance (medium-term process). An integration phase in which the system of distance education, will be deployed and validated, to distant teaching, with the key, creating a chain of knowledge, whose use and benefit will far outweigh the only academic world, to reach a wider audience of learners who want to expand their knowledge, people with special needs, senior citizens, hospital patients, people undergoing rehabilitation, etc. Currently, the National System of Distance Learning Network is based on a platform of video conferencing and e-learning, scattered throughout almost all training institutions. Access to this network is provided by the National Research Network (ARN).

Videoconferencing System Architecture



Architecture Globale de la plateforme de e-learning



V.1.2-E-Algeria 2013

The MPTIC ministry recently revealed a new strategic plan for developing ICTs in the country. The e-Algeria 2013 initiative is supposed to accelerate ICT use in the country, including the government's application of technology to increase access to government information. This strategy is the result of the deliberations of a so-called "e-committee" headed by President of the republic. It follows the rapid growth of mobile telecommunication services in Algeria, but not internet and broadband services.

The E-Algeria strategy is based on several goals: boosting the use of ICTs in public administration and businesses; developing incentive mechanisms and measures to give citizens access to ICT equipment and networks; stimulating the development of the digital economy; strengthening high and very high speed telecommunication infrastructure; developing human capacities; strengthening research, development and innovation; updating the national legal framework.

VI-ELEARNING RESEARCH PROJECTS

VI.1- CoseLearn

CoseLearn is the Swiss program for E-learning that was initiated by QualiLearning with support from the Swiss Agency for Development and Cooperation (SDC). The main goal of this program is to promote distance learning and e-learning by progressively implementing a Virtual Campus in more than 50 partner universities. The program is promoting e-learning in a number of French-speaking countries in Africa, namely Algeria, Burkina Faso, Chad, Congo-Brazzaville, Mali, Mauritania, Morocco, Niger, Senegal and Tunisia. During the first year of the CoseLearn program, 168 experts from the partner universities will benefit from QualiLearning courses.

VI.2-Avicenna Virtual Campus

Avicenna was launched by UNESCO in November 2002 with funding from the European Commission through its Euro-Mediterranean Information Society (EUMEDIS) programme. It is aimed at creating a self-sustainable virtual campus, based on cooperation between institutions of the member countries (Spain, UK, France, Italy, Turkey, Cyprus, Lebanon, Syria, Jordan, Palestine, Egypt, Malta, Tunisia, Algeria, and Morocco).

VI.3- IDE@ project:

VI.4- Continuous training university (UFC)

Three LMS:

- 1-Ecampus dedicated to the training of the public function
- 2-EFAD dedicated to high school teachers
- 3-Dokeos to the training of teachers of French as a foreign language (FLE)

VI.5-ONEFD Office National de l'Enseignement et de la Formation à Distance

الديوان الوطني للتعليم والتكوين عن بعد
(<http://www.onefd.edu.dz/>)



الجمهورية الجزائرية الديمقراطية الشعبية
وزارة التربية الوطنية
الديوان الوطني للتعليم والتكوين عن بعد

يمكن لجميع المتعلمين المسجلين عن بعد طرح الأسئلة

المعلم	سير الأراء	المستجدات التربوية	نشاطات الديوان	التعريف بالديوان	الاستقبال
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العنوان: 43 شارع بن شنب الجزائر

VI.6-CNEPD Centre National de l'Enseignement Professionnel à Distance

المركز الوطني للتعليم المهني عن بعد

<http://www.cnepd.org/fr/>



<http://www.cnepd.org/portail/>





The screenshot shows the 'Portail pédagogique du CNEPD' website. At the top, it features the logo of the Ministry of Education and Vocational Training of the Algerian Republic. Below the header, there are navigation tabs for 'Ressources' and 'Guides'. The 'Guides' section displays three main guide covers: 'GUIDE DU STAGIAIRE', 'GUIDE DU CORRECTEUR', and 'GUIDE METHODOLOGIQUE DE CONCEPTION DES COURS A DISTANCE'. To the right, a vertical menu lists categories: '01. ...FORMATION CONTINUE', '02. ...INNOVATION', '03. ...FORMATION INITIALE', '04. ...DIRECTIONS REGIONALES', '05. ...EVALUATION', and '06. ...MULTIMEDIA'. At the bottom right, there is a promotional banner for 'Consultez les Annales des Examens de vos spécialités' featuring a cartoon character.

VI.7-Projet TARBIANET

VI.8-Tarbiatic , l'Ecole Numérique

<http://www.tarbiatic.net/index.php?lang=fr>

Tarbiatic is an integrated solution built around a software platform developed by EEPAD engineers that allows students from any school in the network "tarbiatic" to continue and enhance their learning outside the official timetable for the school. EEPAD offers for it, to equip each student including those in examination classes of "electronic schoolbag" from which he will be able to access a server resource teaching and coaching school.



The screenshot shows the Tarbiatic website interface. At the top left is the logo 'tarbiatic l'école numérique'. The top right contains navigation links: 'Administrateur | Adhésion | www.tarbiatic.com'. Below the header, there are language selection options: 'English', 'Français', and 'عربي'. The main content area features four large, colorful buttons with images and Arabic text: 'مكتب التلميذ' (Student Office), 'مكتب الأولياء' (Parents Office), 'مكتب المدرسة' (School Office), and 'مكتب الأستاذ' (Teacher Office). Each button has a 'دخول' (Login) button below it. A central globe icon is also visible.

VII-Conclusion

Many factors and actors have to be taken into account in building the Arab knowledge societies: Government, private sector, information, professional and education institutions. The role of e-learning in Algerian universities in the development of a knowledge society, taken as an example, has clearly shown that Arab countries need a new development model based on the following:

- The movement for change that has spread through the socio-political landscape of the Arab region asks for new development pathways that give greater prominence to the interlocking issues of democratic governance, social justice and decent employment.
- Oil-led economic growth has led to premature de-industrialization and reinforced the subordinate position of the Arab region in the global hierarchy of production.
- The Arab region as a whole and most Arab countries individually show a lower level of human development than one would expect based on their income levels.
- Sustainable use of environmental resources is perhaps the most serious long-term development challenge facing the Arab region.

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